

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Shinichi Wakui, et al.

Application No.: Not Yet Assigned

Group Art Unit: N/A

Filed: Herewith

Examiner: Not Yet Assigned

For: ROTOR AND ROTATING ELECTRICAL
MACHINE WITH EMBEDDED
PERMANENT MAGNET

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Dear Sir:

Preliminary to examination, please amend the above-referenced application as follows:

IN THE SPECIFICATION:

Rewrite the paragraph at page 4, line 4, as follows:

Figs. 3(a) through 3(c) are graphs representing the calculated value of cogging torque, torque pulsation and mean torque according to the present invention;

IN THE CLAIMS:

Rewrite claims 4, 5, 6, 7, 8 and 9 as follows:

4. (Amended) A rotor with embedded permanent magnets according to Claim 3 characterized in that, when the radial distance between the outer periphery of said magnetic

flux short circuit preventive holes and that of said rotor core is assumed as "a" closer to the q-axis, and "b" closer to the d-axis, the ratio of "a" to "b" is about 1 to 3 or 1 to 4.

5. (Amended) A rotor with embedded permanent magnets according to Claim 4 characterized in that the permanent magnet embedded in said rotor core is a flat plate magnet.

6. (Amended) A rotor with embedded permanent magnets according to Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a concave arch-shaped form with respect to the outer periphery of the rotor.

7. (Amended) A rotor with embedded permanent magnets according to Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a convex arch-shaped form with respect to the outer periphery of the rotor.

8. (Amended) A rotor with embedded permanent magnets according to Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a V shape in each magnetic pole.

9. (Amended) A rotor with embedded permanent magnets according to Claim 8 characterized in that a non-magnetic substance is inserted in said magnetic flux short circuit preventive hole.

REMARKS

The specification and claims have been amended to put the application in better form for examination. Favorable action on the application is solicited.

Dated: September 27, 2001

Respectfully submitted,

By 

Mark J. Thronson

Registration No.: 33,082

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicant

09644-02704
10220-442950

MARKED-UP VERSION SHOWING CHANGES MADE

[Fig. 3 is a graph] Figs. 3(a) through 3(c) are graphs representing the calculated value of cogging torque, torque pulsation and mean torque according to the present invention;

4. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 3 characterized in that, when the radial distance between the outer periphery of said magnetic flux short circuit preventive holes and that of said rotor core is assumed as “a” closer to the q-axis, and “b” closer to the d-axis, the ratio of “a” to “b” is about 1 to 3 or 1 to 4.

5. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 4 characterized in that the permanent magnet embedded in said rotor core is a flat plate magnet.

6. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a concave arch-shaped form with respect to the outer periphery of the rotor.

7. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a convex arch-shaped form with respect to the outer periphery of the rotor.

8. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 4 characterized in that the permanent magnet embedded in said rotor core is designed in a V shape in each magnetic pole.

9. (Amended) A rotor with embedded permanent magnets according to [any one of Claims 1 to] Claim 8 characterized in that a non-magnetic substance is inserted in said magnetic flux short circuit preventive hole.

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